

## IN THE CLAIMS

What is claimed is:

1. A device for joining a first body vessel to a second body vessel, comprising:  
an inner member having a distal end portion and defining a longitudinal axis;  
5 an outer member defining a lumen dimensioned to receive the inner member therein; and  
a radially expandable anchor disposed at the distal end of the inner member, the  
expandable anchor having an initial condition wherein the expandable anchor is disposed  
between the outer member and the inner member and an expanded condition wherein the  
expandable anchor is radially larger than the expandable anchor in the initial condition.  
10
2. The device according to claim 1, wherein the expandable anchor is made from at  
least one of a sponge-like and a foam-like material.
3. The device according to claim 2, wherein the expandable anchor has a frusto-  
15 conical shape when in the expanded condition.
4. The device according to claim 3, wherein a distal end portion of the expandable  
anchor is radially larger than a proximal end portion of the expandable anchor when in the  
expanded condition.  
20
5. The device according to claim 2, wherein the expandable anchor radially expands  
upon contact with moisture.

6. The device according to claim 1, wherein the inner member comprises an inner tubular sleeve defining a central lumen extending therethrough.

5 7. The device according to claim 6, wherein the inner tubular sleeve includes a region near its distal end which is porous to permit transmission of moisture, via the central lumen, to the expandable anchor.

8. The device according to claim 6, wherein the expandable anchor is arranged,  
10 when in the expanded condition, to permit liquid to pass therethrough and drain through the inner tubular sleeve.

9. The device according to claim 1, wherein the expandable anchor defines at least one longitudinally oriented passage extending completely therethrough when in the expanded  
15 condition.

10. The device according to claim 1, further comprising a control unit, remotely located, for operating the anastomotic device.

20 11. The device according to claim 1, further comprising a sheath disposed about the expandable anchor for defining the shape of the expandable anchor when in the expanded condition.

12. The device according to claim 1, further comprising a grasper operatively connected to the distal end of the inner tubular sleeve.

5 13. The device according to claim 2, wherein the expandable anchor is fabricated from a bio-absorbable material.

14. The device according to claim 13, wherein the material dissolves after a predetermined period of time.

10

15. A device for performing a surgical anastomosis, comprising:  
a pair of concentric tubular sleeves including an outer sleeve and an inner sleeve, each of the pair of concentric tubular sleeves having a distal end portion and a proximal end portion; and  
a radially expandable anchor operatively disposable between the distal end portions of the  
15 pair of concentric tubular sleeves.

16. The device according to claim 15, wherein the expandable anchor is fabricated from at least one of a foam-like and sponge-like material.

20 17. The device according to claim 16, wherein the expandable anchor has an initial condition for insertion of the anastomotic device through a body lumen and an expanded condition which inhibits withdrawal of the anastomotic device from the body lumen.

18. The device according to claim 17, wherein the expandable anchor is expanded from the initial condition to the expanded condition by application of a fluid.

5 19. The device according to claim 17, wherein the expandable anchor has a frusto-conical shape when in the expanded condition.

20. The device according to claim 17, wherein the expandable anchor has a thin-walled cylindrical shape when in the initial condition.

10 21. The device according to claim 17, wherein the expandable anchor defines at least one longitudinally oriented passage extending entirely therethrough when in the expanded condition.

15 22. The device according to claim 17, wherein the inner tubular sleeve of the pair of concentric tubular sleeves includes a region of porosity formed near the distal end thereof.

23. The device according to claim 22, wherein the region of porosity to transmit a fluid to the expandable anchor.

20 24. The device according to claim 23, wherein the inner tubular sleeve includes at least one longitudinally oriented lumen extending therethrough, wherein the lumen is configured

and adapted to transmit the fluid to the plurality of perforations.

25. The device according to claim 16, wherein the expandable anchor is fabricated from a bio-absorbable material.

5

26. A method of performing a surgical anastomosis, comprising the steps of:

providing a device for performing the surgical anastomosis, the device including:

a member having a distal end portion;

a radially expandable anchor operatively disposed at the distal end portion of the

10 member; and

a cover disposed over the radially expandable anchor; and

passing the device through an opening in a first body vessel and into a second body vessel such that a distal end portion of the expandable anchor is positioned at least partially within the second body vessel;

15 withdrawing the cover to expose at least the distal end portion of expandable anchor;

expanding at least the distal end portion of the expandable anchor within the second body vessel such that the expandable anchor engages the second body vessel;

moving the device until the second body vessel contacts a distal end of the first body vessel and a proximal end portion of the expandable anchor is positioned at least partially within  
20 the distal end of the first body vessel;

withdrawing the cover to expose the proximal end portion of the expandable anchor; and

expanding the proximal end portion of the expandable anchor within the distal end of the

first body vessel such that the expandable anchor engages the distal end of the first body vessel.

27. The method according to claim 26, wherein the steps of expanding include the introduction of a fluid to the expandable anchor.

5

28. The method according to claim 26, wherein the expandable anchor is fabricated from at least one of a foam-like and sponge-like material.

29. The method according to claim 28, wherein the expandable anchor is expanded by application of liquid thereto.

10

30. The method according to claim 29, wherein the expandable anchor has a frusto-conical shape when in an expanded condition.

15

31. The method according to claim 29, wherein the expandable anchor has a cylindrical shape when in a compressed condition.

20

32. The method according to claim 29, wherein the member comprises an inner tubular sleeve having a region of porosity formed near the distal end thereof and the liquid is introduced through the sleeve, through the region of porosity, to the expandable anchor.

33. The method according to claim 26, wherein the step of moving comprises approximating a body organ and a body lumen.

34. An anchoring device, comprising:

5 a member having a distal end;

a radially expandable anchor disposed at the distal end of the member; and

a cover disposed over the radially expandable anchor to maintain the radially expandable member in an initial pre-expanded condition.

10 35. The anchoring device of claim 34, wherein the cover comprises a tubular sleeve having a lumen sized to receive the member and the radially expandable anchor.

36. The anchoring device of claim 34, wherein the radially expandable anchor is sized so that upon removal of the cover, the anchor expands.

15 37. The anchoring device of claim 34, wherein the radially expandable anchor comprises a sponge that radially expands upon the introduction of a fluid.

38. A method of deploying an anchoring device, comprising:  
20 providing an expandable anchor, the expandable anchor being expandable upon introduction of a fluid;  
introducing the fluid to a first portion of the expandable anchor so that the first portion is

expanded and a second portion of the expandable anchor remains in the pre-expanded configuration; and

introducing the fluid to the second portion of the expandable anchor so that the second portion is expanded.

5

39. The method of claim 38, wherein the expandable anchor comprises a sponge and the fluid comprises a liquid.

40. The method of claim 38, wherein the expandable anchor comprises a membrane  
10 for restraining expansion of the expandable anchor.

41. The method of claim 38, wherein the first portion engages a body vessel upon expansion.

15 42. The method of claim 41, further comprising the step of moving the expandable anchor, after the first portion is expanded, so that a second body vessel is adjacent the second portion.

43. The method of claim 42, wherein the second portion engages the second body  
20 vessel upon expansion.